Ancient Urban Planning in the Mediterranean
New Research Directions

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Contents

List of figures vii
List of contributors x

1 The order of cities: ancient urban planning in the Mediterranean
SAMANTHA L. MARTIN-MCAULIFFE 1

2 Urbanisation in inland Sicily: acculturation on the periphery of the Greek world
SPENCER FIFE 3

3 The urban development of late Hellenistic Delos
MANTHA ZARMAKOUPI 28

4 The collective image of a city: structure and meaning of Hellenistic agora
BARBARA SIELHORST 50

5 The memory remains: non-verbal symbolic communication and the planning grid at Pednelissos (Pisidia, SW Turkey)
AHMET ÇINIQ 68

6 Cyrene and Apollonia: the Classical urban plan as a measure of opposites
LYNDA MULLEN 83

7 Privileged topography: Vitruvius and the siting of Halicarnassus
DANIEL MILLETTE 96

8 Razed or raised?: echoes of the Punic city in Roman Carthage
JESSICA AMBLER 107
vi Contents
9 Triumph, power and providence in Roman town planning:
the golden age of Flavian Rome
FLAVIA MARCELLO
319
10 Albano: castrum to town
ALLAN CEEH
148

Index
16/
3 The urban development of late Hellenistic Delos*

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Introduction

Delos underwent a rapid economic and urban development after 167 BC, when Romans granted the port of Delos `duty-free' status under Athenian dominion and turned it into a commercial base connecting the eastern and western Mediterranean (see Figure 3.1). The island of Delos was home of the sanctuary of Apollo since the Archaic period and, due to its advantageous geographical position in the centre of the Aegean world, commanded a huge cult network that intertwined religious with economic and political activities. After the grant of the statute of ateliea by the Roman senate, Delos became an intermediary in Rome's commercial relations with the Hellenistic East. The result of this economic development was an unprecedented demographic growth and, by consequence, an accelerated urbanisation. This is attested by the formation of new neighbourhoods - the Skardhana and the stadion neighbourhoods - as well as the re-development of existing urban and harbour areas of the island through the construction of jetties, docksides, warehouses and markets.

Although numerous archaeological excavations have probed the city of Delos for over a century and recent comprehensive studies have adjusted our understanding of the domestic architecture of the Hellenistic city, the nature and history of urbanism on Delos remains a surprisingly understudied topic. Only preliminary thoughts have been expressed on the urbanisation of late Hellenistic Delos together with an estimate of the extent of the city and its population by the use of quantitative methods. This paper addresses the factors that shaped the city texture on late Hellenistic Delos and outlines the methodology of UrbanNetworks - my project on the urban development of late Hellenistic Delos, which was initially funded by the Marie Curie Intra-European Fellowship Scheme (2013–15).

UrbanNetworks and the study of Hellenistic cities

UrbanNetworks focuses on the residential neighbourhoods of late Hellenistic Delos to address the ties between economic change and urban growth. By analysing the urban development of late Hellenistic Delos in relation to economic activities, public administration and private initiatives, the project examines these neighbourhoods as microcosms of the broader developments that the island underwent during the Hellenistic period, when the island became a commercial base connecting the eastern and western Mediterranean.

The field of urban studies in the Hellenistic period is currently dominated by two major trends. On the one hand, research has concentrated on aspects of town planning, characteristic urban architecture and physical infrastructure. On the other, work has tackled the organisation, economy and physical administration of cities, including the crucial role of benefaction. Whereas studies on Roman urbanism have combined these two key approaches by relating urban form with economic developments, public administration and private initiatives, there has been no similar effort for the study of the Hellenistic city. The project aims to analyse the Hellenistic urban fabric not merely as a result of a single planning initiative but of consecutive decisions and actions of both private and public sectors.

More recently, projects on the Hellenistic city aim to address the dynamic character of urban space in Classical antiquity, including the socio-political and environmental factors that inform it. These studies examine the multivalent character of urban form as well as the socio-political structures and institutions in ancient cities. However, they still focus on the idealised concepts of the Hellenistic and Roman urban environments, such as monumentality, planification and axiality, and do not examine the ways in which activities in the micro-scale of the city shaped its macro-scale. The UrbanNetworks project will complement these studies by offering a multi-disciplinary approach to urban growth in the Hellenistic world. In particular, the aim of UrbanNetworks is to evaluate the ways in which uncontrolled factors, such as micro- and macro-scale economic

Figure 3.1 Plan of Delos and Rheneia
(© Mantha Zarmakoupi, after Ammari maps).
and social developments, fit in our understanding of urbanism in antiquity. Drawing on current developments and debates in the fields of Hellenistic economy, as well as contemporary urban studies, UrbanArenas addresses the relations between the forces that shaped urban growth (economic activities, public administration, private initiatives, cultural and religious diversity) and major components (architecture, landscape, infrastructure) of the urban form on Hellenistic Delos.

A study that relates urban form with economic developments, public administration and private initiatives requires detailed information on the organisation, economy and administration of a city as well as a good state of preservation of its physical remains. The Hellenistic city of Delos is a unique site for such a study; its buildings are in an excellent state of preservation, and it has an outstanding epigraphic record that is complemented by historical sources. UrbanArenas focuses on the main residential neighbourhoods of Delos – the Theatre District, the Inopos District, the Skardhana District and the Stadium District (see Figure 3.1 and Figure 3.2) – to examine the urban development in relation to the economic activities as well as the public and private initiatives. Following the example set by Hoepner and Schwandner, who focused on houses to study urban planning, I analyse the integration of economic activities in the Delian houses in order to understand the changes that the city of Delos underwent in this period. By analysing the transformation of the built environment in relation to manufacturing activities, shopping and storage facilities as well as the construction of public buildings, the project examines the neighbourhoods as microcosms of the broader changes Delos underwent during the late Hellenistic period.

Although UrbanArenas focuses on a specific case study of urban growth, its ultimate goal is to offer an alternative approach to the understanding of urbanism in antiquity. The rapid urbanisation of Delos may be compared with far more accelerated developments of growing commercial centres of Asia and the Gulf region today. Urban studies today recognise what may be termed as “a disciplinary paralysis” to sufficiently describe, let alone influence, the accelerated urbanisation in developing regions of the world and the rapid redevelopment in existing urban areas. UrbanArenas has the advantage of focusing on an early phenomenon of rapid urbanisation during a period that is well attested in the written and material records. By examining the evolving agents, relationships and consequences of the rapid urbanisation on Delos, this project will identify a model of urban growth that to date has been overlooked in the study of ancient cities that have focused on the idealised concepts of the Hellenistic and Roman urban environments, such as monumentality, planification and axiality. This alternative model of urban growth is indeed the dominant one for contemporary urban studies. Analysing a historical paradigm of such a model can only bring better understanding of the factors that shape the modern city today.

The socio-economic momentum of Delos

From a population of about 1,500 to 2,000 in the period of the independence, Delos gained an estimated amount of roughly 15,000 residents during the period of the second Athenian domination. It has been suggested that the island reached a population of 20,000 to 30,000 residents at its peak. However there is no firm evidence – inscriptions give evidence for 1,200 citizens and a population of about 6,000 at the beginning of the first century BC. During this period the island is characterised by its cosmopolitan character. The majority of the new residents of the island were from the eastern Mediterranean and the Italian peninsula. While some eastern merchants at Delos came from cities as close as western and southern Asia Minor, the majority came from places further abroad, including Antioch, Berenice, Tyre, Sidon, Alexandria and from more exotic points still further east, such as Gadar, Heliopolis, Arabian Nahara, Cerra on the Persian gulf and in one instance from as far away as Mina in south Yemen. The largest ethnic contingent of the island was, however, Roman-Italian.

The small settlement of the period of independence, which clustered around the main sanctuary area with some smaller sanctuaries and cultural centres beyond, exploded during the period of the second Athenian domination. The urbanisation expanded from the area of the old sanctuary centre outwards. The new markets – the Agora of the Hermaitai or the Kompetalsiai (GD 2), the Agora of Theophrastos (GD 49) and the Agora of the Delians (GD 84) – clustered at the borders of the sanctuary. The main harbour facilities expanded to the south of the Agora of the Hermaitai or the Kompetalsiai (see Figure 3.3). Houses clustered next to the sanctuary in the old neighbourhood of the Theatre District and new residential neighbourhoods where created.
next to good natural harbours (see Figure 3.4)\(^{15}\) – probably to complement the activities of the main harbour that was overloaded by the maritime traffic going through the island in this period; I will return to this point later in my chapter. Not all the areas of the island have been excavated but the extension of the city has been recorded in the recent survey of the island that Jean-Charles Moretti conducted for the new atlas of Delos.\(^{26}\)

According to the literary sources, slaves and luxury goods – such as perfumes and glass – all originating in the Middle and Far East, as well as the highly prized Delian bronze statues were traded through Delos.\(^{27}\) Strabo described Delos as the location of a trans-Mediterranean slave trade to the agricultural estates, mines, shops and households of the Roman West (Strabo 14.5.2).\(^{28}\) However, no physica remains have ever been identified on the island to confirm the importance of the slave trade.\(^{29}\) Archaeological evidence points to the existence of the production of perfume, purple dye, glass jewelry, marble and bronze sculptures and terracotta figurines on Delos.\(^{30}\)

Although the literary sources stress the importance of the Delian emporion, the archaeological record has not provided evidence for the infrastructure – such as a large number of large-scale storerooms – that one might expect to serve a major commercial centre. A few large-scale peristyle buildings that were used as warehouses and as places of transaction are located to the south of the main harbour.\(^{31}\) This has led to convoluted discussions on the archaeological evidence, the most well-known one

Figure 3.4 House of the Seals in the North District, phase 2, plan

being the controversy over the so-called Agora of the Italians and its alleged use as a slave market.\(^{32}\)

Earlier studies on the economy of Delos have focused on the public spaces but I argue that part of the answer can be found in the private sphere. Specifically, the small-scale commercial, manufacturing and storage facilities that were gradually created within the urban fabric of the city complemented the economic activities of the trading centre. The study of the late Hellenistic Delian houses conducted in the context of UrbAnetworks shows that a large number of adaptable spaces were gradually created to accommodate shops, workshops, spaces for storage and – quite possibly – rooms to be rented out.\(^{33}\) These changes show the ways in which owners adapted and transformed the organisation of their houses in order to integrate commercial activities in them rather than creating purpose-built commercial spaces.

As an entrepôt – a trading point – Delos did not have large-scale infrastructure for its economic activities. As Duchêne has pointed out, London is the most important oil-trading hub but we never see oil tankers on the Thames.\(^{34}\) Most goods were not unloaded and just the buying and selling took place on land, as was the case in premodern Hong Kong.\(^{35}\) In the case of slaves, for example, they were probably brought
ashore in small groups, sold and then put back on board the ship. The operation of the entrepôt of Delos triggered a network of economic activities around it: for example, local manufactures produced small-scale goods that complemented the main shiploads, shops and markets served for re-victualing the ships, and rooms were rented out to businessmen for short time stays — again like Hong Kong. In the following discussion, I will address the ways in which the areas around the harbours were developed in order to accommodate the entrepôt trade of Delos.

The main harbour zone

The main harbour zone is where the activities in relation to the “wholesale” trade of Delos took place (see Figure 3.3). Development in this zone started during the third century BC, with the establishment of Delos as a trade passage during the period of the independence of the island. The landfill (γῆρα), mentioned in inscriptions from 217 BC onwards, was used to fill the waterfront towards the west of the sanctuary of Apollo.⁴⁶ This landfill created the areas where the Agora of the Hermastai or the Kompetialistai (GD 2), with accompanying shops α, β and γ, the Portico of Philip and the West Portico (GD 3) and the Agora of Theophrastos (GD 49) would later stand on.⁴⁷

The Agora of Theophrastos, named after the epimelites that oversaw the completion of the construction works of the landfill just before 126/5 BC (ID 1645), featured a circular structure at its eastern edge, which is now submerged in the sea. An inscription informs us that Socrates, an agoranomos active around 100 BC, installed this circular structure — a kuklos (κύκλος; ID 1835) — which according to later sources was used for auctions of slaves as well as other commodities.⁴⁸ This circular structure must have been the place where slaves, together with other commodities, were sold. Merchandise would be set in the centre of the kuklos and interested individuals could place bids. Thus, slaves as well as other merchandise could be brought ashore in small groups, sold in the kuklos, and then put back on board the ship.⁴⁹

Towards the south, due to the same landfill and roughly at the same time as the Agora of Theophrastos, in between 130 and 120 BC, the Agora of the Hermastai or the Kompetialistai was created on a previously established square.⁵⁰ The volume standards for liquids, or sekomata, found in the shops of this area, and accompanying inscriptions indicate that the square and adjoining shops were dedicated for selling oil and wine, according to the Athenian standards of volume, and overseen by the Athenian epimelites Aristarates at the beginning of the first century BC.⁵¹ The volume standards found in this area have a significantly larger capacity — that is 35–9 liters — than the volume standards found in the shops that were further away from the harbour, inside the Theatre District that is located to the southeast of the Agora.⁵² This suggests that while the measures found in the residential neighbourhoods served the local retail trade of shops, the measures of the Agora of the Kompetialistai were used for calculating the oil and wine for the ships’ food supplies.⁵³

In sum, the Agora of Theophrastos was the place for the auctions of the Delian emporion and the Agora of the Hermastai or the Kompetialistai the place for re-victualing the ships. It is clear that the waterfront development, a construction in operation since the end of the third century BC that Theophrastos completed in about 125 BC, was a necessary action for creating areas where these operations of the emporion could take place.⁵⁴

Integration of economic activities in the residential neighbourhoods

While the activities of the emporion of Delos took place in the main harbour zone, the residential neighbourhoods accommodated a network of small-scale economic activities that were developed due to the operation of the trading port (see Figure 3.2). Owners transformed their houses in order to accommodate commercial, manufacturing, and storage uses. One solution, for example, was to break down the larger rooms of the ground floor, the typical reception rooms,⁴⁶ to form smaller rooms that accommodated workshops, shops and groups of rooms that could be rented out; for instance, the House of the Seals (Maison des Sceaux, GD 59 D, see Figure 3.4) in the Skardhana District,⁵⁷ and the House ID in the Stadion District.⁵⁸ Another solution was to keep the original architectural organisation and extend the house in order to add a group of rooms; for instance, small rooms were subsequently added outside the House of the Tritons (Maison des Tritons) and the House of the Actors (Maison des Comédiens, GD 59 B) in the Skardhana District (see Figure 3.5), taking over part of the street (rooms D and E to House of the Actors; rooms Al-AI'-AJ-AK'-AL-AM-AN to House of the Tritons), in order to create spaces for service, storage as well

Figure 3.5 House of the Actors and House of the Tritons in the Norte District, plan
Source: © Mantha Zarmakoupi, after Bruneau et al. 1970, pl. A.
as workshops. Alternatively, owners used the available space to accommodate their needs and there was no architectural reorganisation. For example, House III O in the Theatre District was transformed into an oil workshop; and a marble workshop was installed in rooms 8 and 10 of the House of Kerdon (Maison de Kerdon, GD 83). By transforming either the architectural organisation of the houses or the use of spaces within the houses, owners created new spatial arrangements in order to generate profit in the dynamic economy of the island in this period. These changes were implemented reactively in order to fit the needs of the inhabitants and their commercial activities, the scale of which was not foreseen. The shops and workshops that were integrated in the Delian houses provide evidence for a small-scale economy that operated alongside the trading centre of Delos and grew because of its operation.

The emporion and the urban development of Delos

The creation of two new neighbourhoods next to natural harbours shows, on the one hand, the growth of the population at this time and, on the other, the need for more spaces next to harbour facilities (see Figure 3.2). The two new neighbourhoods, the Skardhana and Stadion Districts were created some decades after the operation of the entrepôt of Delos. The Skardhana District was built around 130 BC and the Stadion District towards the end of the first century BC. Both neighbourhoods went out of use in 69 BC, when the pirate Athenodoros sacked the island – so the Skardhana District was occupied for 60 years and the Stadion District for 40 years. Numerous changes were conducted over this relatively short period of time, which is telling about the dynamic character of the economic activities on the island in this period.

The changes in these new neighbourhoods show the inhabitants' constant effort to make the best of the available spaces near the harbour areas. The capacity of the harbours of these neighbourhoods was significantly smaller and could accommodate smaller boats. We may speculate that in the case of these smaller harbour facilities, smaller in size and lighter in weight goods, such as perfumes, unguents, incense, gems and dyes, were being loaded on the boats as supplementary to their main cargo. Until recently however, these smaller harbours were not considered important for the Delian emporion and research had focused on the main harbour. The UrbaNetworks underwater investigation of the submerged areas of the Stadion District – a collaboration between the Department of Underwater Antiquities of the Hellenic Ministry of Culture and Sports and the Institute for Historical Research of the National Hellenic Research Foundation – proved otherwise.

In fact, we know very little about the ways in which the main harbour of Delos – the so-called Sacred Harbour – accommodated its maritime traffic as no underwater investigation has been conducted in this area. There is a relative sea-level rise in the Cyclades of about two m from the period under examination, so the main harbour as well as parts of the city of Delos have now been submerged – but this is not the reason for which the main harbour of Delos has not been investigated. The main problem is that the submerged structures of the main harbour have suffered irreversible changes, as the excavations in the nineteenth and twentieth centuries deposited the archaeological rubble on the sea floor and the new port installations were constructed over it. These new structures, and new underwater currents that they created, have resulted in irreversible changes to the remnants of the main harbour.

The UrbaNetworks underwater investigation of the submerged structures in the Stadion District identified the remains of a large commercial pierstyle building situated along the ancient coastline, which is comparable to the large commercial pierstyle buildings on the west side of the island that are also located along the ancient coastline to the south of the main harbour. The identification of a facility that is associated with commercial activities so close to the ancient shoreline is an important finding for understanding the ways in which the city of Delos accommodated its emporion. As mentioned earlier, studies so far have focused on the area of the main harbour. The Stadion District was hitherto considered as a kind of suburb, since it seems now to be cut off from the west side of the island – it should be noted, however, that it is not really the case since there are unexcavated remains between the Stadion District and the sanctuary of Apollo indicating that this area was also inhabited. The finds from the underwater investigation in the Stadion District prove, nonetheless, that this area had a very similar character to the areas next to the main harbour and was part of the Delian emporion.

Besides, if we consider the maritime routes connected to Delos (see Figure 3.6), we notice that approaching Delos from the east – say from Ephesos – the Stadion District is a more amenable harbour. In fact, this harbour is a better choice if one needs to avoid the strait between Mykonos and Delos, which is very difficult to cross with strong Etesian winds – the prevailing northern winds – and could also accommodate the maritime traffic coming from the marble quarry that is located at the southeast of Kynthos. Similarly, the harbour of the Skardhana District is a better choice when coming from the north – say from Chalkis – and facing south winds, which are not as frequent but really powerful when they occur. The operation of an emporion need not have depended on a single harbour. Although the mechanisms of trade were weighted towards direct preferential links between emporia ports, rather than towards random coastal tramping or cabotage, an emporion has several harbours, which could serve according to the weather conditions. A selective coastal tramping around Delos

Figure 3.6 Map showing maritime connections in the Aegean according to ancient authors
Source: Arnaud 2005, 225.
would, in fact, allow skippers to avoid difficult crossings according to the weather conditions and seems to have been the preferred course of action. The use of the natural harbours around the island would, in fact, justify the urban growth of Delos during the late Hellenistic period, as the city extended next to natural harbours that could accommodate its emporion.

Conclusion

It is evident that the urban and economic expansion of Delos underwent in this period was unpredictable for the inhabitants of Delos. Even the new neighbourhoods were not sufficient to accommodate the growing population and small-scale economic activities on the island that grew because of the operation of the trading centre. The numerous changes in the organisation of the interiors of the houses within the neighbourhoods show the constant effort to make the best of the available spaces near the harbour areas.46 These changes were implemented reactively in order to fit the needs of the inhabitants and their commercial activities, the scale of which was not foreseen. Nothing could indeed have predicted this enormous urban and economic expansion of Delos in this period – neither the fame of the sanctuary, nor the quality of the harbours of Delos, nor the geographical position of Delos. The decision of Rome to grant the island the status of a free port combined with the destruction of Corinth, a powerful rival, in 146 BC, as well as the intensification of the relation of Rome and Pergamon for which Delos played an intermediary role, led to the development of the commercial cityscape of Delos.

In the late Hellenistic period, Delos became a "merchant city," to embrace the concept of Max Weber47 – a city maintained by its commerce, whose organisation and form were indeed shaped vis-à-vis handling and shipping activities as well as the micro-economy that developed alongside them. The urban development that Delos underwent in this period can be only understood in relation to both the operation of the emporion, the long-distance trade and the micro-scale economy that the emporion generated within the urban fabric. Delos has no walls to mark its boundaries, or gates and tombs to point to its entrance: the sea is the boundary and the harbours are the gates to the city of Delos. The coastline and harbours of Delos were the defining elements in the organisation of the city, embodying Purcell’s notion of the orai maritina – not as a mere geographical term, but a systematization of human resources.48 Operating between the micro- and macro-scale economic activities of the emporion, the coastline of Delos defined and regulated the development of the city.

Notes

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1 Hatzfeld 1913, Zaleski 1982, Reger 1994. The growing commercial importance of the island of Delos was not only a consequence of the grant of freedom in 146 BC, but also of other equally important developments such as the Roman destruction of Carthage and Corinth, the rapid collapse of the Seleucid Empire in the latter half of the century and the creation of the Roman province of Asia in 129 BC. For a summary of the events see McGing 2003, 83-4. Strabo says that the merchants changed their place of business from Corinth to Delos following the destruction of the former in 146 BC for two reasons: they were attracted first by the thriving tolo lópato and second by the good location of the harbour, "as it is on the sea-route from Italy and Greece to Asia" (Strabo 10.5.4). To quote Hatzfeld, "because Delos was a shrine, it had become an international town; because it was an international town, it became a place of commerce." Hatzfeld 1919, 34, 36. See also discussion in Rye 2014, 197-206.


3 Strabo, Pliny, Pausanias and Lucullus. Pausanias (3.23.3-6) described Delos at this time as the trading station of all Greece. Pliny (Naturalis Historia 34.9) reported that the mercati on Delos were called autere toto orbe, more specifically after the development of the Roman shipping lane to Asia (so after 133 BC). The contemporary poet Lucilius referred to the mighty port of Puteoli as "a lesser Delos" (Paulus, ex Pesto 88.4: 'Miserum Delum/ Puteolos esse dixerunt... unde Lucilius – inde Didascarchium populos Delamique minorem [Lucilius 118]). On the Delian bronzes: Pliny Naturalis Historia 34.9; Cicerio Pro Sexto Roscio Amerino 133. Other luxury items: spices, unguents, incense, goods, statues, metals, dyes, tapestries, textiles and linens.

4 On the port and dockside structures see also: Duchêne and Fraise 2001.

5 The studies of the French School in Athens have been published in the series Exploration archéologique de Delos. The volumes dealing with the architecture of the residential areas are vol. 8 (Theatre District), vol. 27 (North District, L’Ilot de la Maison des Commerçants) and vol. 28 (North District, L’Ilot des Bijoux, l’Ilot des Bronzes, la Marécotte). Recent studies in domestic architecture: Trümper 1998; Trümper 2005; Trümper 2007; Trümper 2010; Tang 2005; Nevet 2010, 63-88 (ch. 4, "Housing and cultural identity", Delos, between Greece and Rome[3]; Zarmakoupi 2013a; Zarmakoupi 2013b).

6 Bruneau 1968; Marin 1977; Trümper 2002. See also discussion in Zarmakoupi 2013b.


8 FP7-PEOPLE-2012 IEF, Project Title: UrbANetworks, Grant Agreement n° PIEF-GA-2012-331969. See website of the project: https://urbanetworks.wordpress.com

9 For example: Marin 1977; Owens 1991.


11 For example: Bringmann 2000.

12 For example: Heinzelmann 2002; Montexh 2010.

13 For instance, the German Research Foundation [DFG] Research Project, Die hellenistische Polis als Lebensform, www.polsikultur.de, 2006-2012. The results of this research project that was funded by the Deutsches Forschungsgemeinschaft are published by Verlag Antike in the series Die hellenistische Polis als Lebensform (www.verlag-antike.de/verrei-tern/SPF), e.g. Matthaei and Zimmermann 2009. Also important is the Danish project UrbNet (Urban Network Evolutions) which is based in Aarhus and is funded by the Danish National Research Foundation (http://urbanet.au.dk, 2015 – ). This project aims to address how “urban networks catalysed societal and environmental expansions and crises in the past” (http://urbanet.au.dk/about-urbanet/).

14 For example: Archibald et al. 2011.


16 The Quartier du Théâtre, the Quartier de l’Inopos, the Quartier de Skardhana and the Quartier du Stade.


18 See for instance one of the publications of the Harvard Project on the City: Koolhaas et al. 2001.

19 Roussel 1931; Trèoux 1952, 582, n.3; Couilloud 1974, 307–315.
The catastrophic events occurring in Syria, Palestine and Cilicia, such as the Seleucid amendments of rebel ethnicities in the Achaemen to 106 BC, provide a context for the arrival of Syro-Palestinian traders in Delos (Rauh 1993, 46).

Tétreau (1992) gives 68 ethnics from Antioch, 64 from Berytus, two from Laodicia in Phoe- nicia and 10 from Abydos in Syria, 32 from Hierapolis, 31 from Tyre, 23 from Sidon, 16 from Ascalon and 12 from Salamis. These groups organized themselves religiously as well as ethnically according to the worship of the gods of their homelands; for example, the merchants from Tyre formed themselves into the Heraklesias of Tyre (i.e. the “worshippers of Tyrian Melqart”). The merchants from Berytus comprised the Poseidoniasii of Berytus (worshippers of Berytian Baal): ID 1520, 1772–96.

The Roman-Italian religious associations – the collegia of the Hermastai, Apolloniasitai, Poseidoniasitai and Kompastielai – represented the largest ethnic contingent of the island. Their importance can be gauged by the large number of Roman-Italian families recorded in each of them. Rauh 1993, 30, Table II: “Roman and Italian families producing homines collegium at Delos in the pre-Sullan era (before 81 BC)”. Roman, Latin, Etruscan, Cam- panian, Apulian and Samnite gentilicia are attested in this list, as are Greek families from towns such as Heraclea, Neapolis and Tarentum. The majority of the Romanoi on Delos were slaves and freedmen. Given that the Romans worked through patronage, it should come as no surprise that estimates based on onomastics demonstrate that the majority of the Romanoi recorded at Delos were themselves slaves and freedmen of Hellenistic Greek and Syro-Phoenician origin who worked as Roman-Italian patron families and bore their nomenclature. Hazfeldt (1919) estimated that of 230 Romanoi recorded on the island, 88 were freeborn, 95 were liberti, and 48 were slaves. Rauh’s survey in 1590 of inscriptions published since 1919 contains an additional 300 Romanoi whose names can be split, in simi- lar proportions to those found by Hazfeldt, between freeborn (118 or 40%) and slave-born (freedmen and slaves combined, 182 or 60%). Rauh 1993, 30–2. See also discussion in Kay 2013, 197–206.

Bruneau and Ducat 2005, 163–6 (GD 2, Agora of the Hermastai or the Kompastielai), 213 (GD 49 Agora of Theophrastos, 258–9 (GD 84, Agora of the Delians). GD plus a number indicates the numbering of the monuments in the Guide de Delos (Bruneau and Ducat 2005).

Ardaillon 1896, 437–44; Jardé 1906; Pàris 1916, 30–61; Roussel 1916 1897, 300–2.


Moretti et al. 2015. The atlas will be shortly available in a GIS from enabling users to incorporate into it results from new excavations (Bréquet 2012).

Strabo, Pliny, Pausanias and Lucullus. Pausanias (3.23.3–6) described Delos at this time as the trading station of all Greece. Pliny (Naturalis Historia 34.9) reported that the mercatus in Delo wis celebrantius terto orbe, more specifically after the development of the Roman shipping lane to Asia (so after 133 BC). The contemporary poet Lucullus referred to the mighty port of Puteoli as “a lesser Delos” (Paulus, ex Festo 88.4: “Minorem Delam / Puteolos esse diversis . . . unde Luculus – unde Dicaearchus popular Delamque minorem [=Lucullus 118]. On the Delian bronzes: Pliny Naturalis Historia 34.9; Cicero Pro Sexto Roscio Amerino 133. Other luxury items: spices, unguents, incense, gems, statues, metals, dyes, tapestries, textiles and leathers.

Strabo says that Delos was capable of handling 10,000 slaves per day. Although this figure ought not to be taken literally, it should not be totally discarded either. See: Harris 1979, 82.

Urban development of Hellenistic Delos

Some of these underwater remains had been previously identified and published as harbour facilities by Alexandros Papageorghi-Venetis (1981, 106). The UrbanNetworks underwater survey determined that they are settlement remains, not harbour facilities. Specifically, we located and documented two spaces, one at a depth of about twenty and about thirty meters from the shoreline, and a second at a depth of 70 centimeters and a distance of ten meters from the shoreline. Both spaces featured pots that were fixed in the floor. The two spaces of the Stadium District, however, feature a large number of fixed pots—specifically, 18 pots have survived in each room—and it seems more likely that these spaces were part of some kind of shop, or workshop, and that these pots were used for storage. Both spaces seem to belong to one large building that featured a peristyle court-yard, as numerous fragments of columns have been found in its middle area. In addition, a series of large stone blocks were found to the south of the east end of the building, which probably formed the waterfront of the settlement at the eastern end of the Stadium. The building is therefore located at the eastern edge of the district along the ancient coastline which was artificially formed (Zarmakoupi and Athanassoulas (forthcoming) and Zarmakoupi 2015b, 124–6). See also information at the website of UrbanNetworks (https://urbanetworks.wordpress.com/underwater-fieldwork-project/) as well as the press release of the National Hellenic Research Foundation (www.iee.gr/thesellinstitutes/ihf/news/2015/5.07_2015_PRESS_Delos2015_en.pdf).

58 See the new atlas of Delos: Moretti et al. 2015, plate 5.

59 It is possible that the small bay to the north of the neighbourhood in the area of Gournia served as an anchorage during the late Hellenistic period in order to complement the activities of the main port, and an anchor found in this bay in 2003 supports this hypothesis.

60 For a discussion of the maritime routes in the Aegean on the basis of the ancient sources, see: Arnaud 2005. 223–7 and map on p. 223. For a discussion of the prevailing winds and the sailing season see: Beresford 2013, 79–85.


62 For a discussion of the development of the neighbourhoods in relation the harbour facilities see: Zarmakoupi 2015c.

63 Weber 1958, 70–1. Relying on Weber’s conceptualization of city models, Finlay (1977 [1981], 1987–89) has argued that the Greek polis is a “consumer city.” However this view has been strongly challenged. See: Bresson 2000.

64 Purcell 1996, 274. The expression is by Cicero, Nat. D. 3.91, “hi duos illus oculars orae maritimi effoderunt.” Purcell interprets this as: the port as an eye of the city (Purcell 1996, 271–2). Paroikia was one of a group of five colonies in ora maritimes, the other four being Lissimun, Valerum, Salernum and Bruxentum (Liv. 32.92.3), D’Arms 1976, 1.

Bibliography


46 Martha Zarmakoupi

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